What is claimed is:

1. A data encoding apparatus for encoding data for every data block of a predetermined number of pixels of data, comprising:

a data string rearranging means for outputting data of sequentially input data blocks in a predetermined output sequence corresponding to an input sequence;

a block end data detecting means for detecting input data not coinciding with reference data and latest in said output sequence from among the input data of said data string rearranging means as block end data;

a block end judging means for judging whether or not the output data of said data string rearranging means is said block end data; and

an encoding means for sequentially generating codes in accordance with the output data of said data string rearranging means, generating a first code after the generation of the codes in accordance with the output data when it is judged at said block end judging means that the output data is said block end data, and terminating the encoding of the data block containing the output data.

2. A data encoding apparatus as set forth in claim 1, wherein said encoding means counts the number of said reference data continuously output from said data string

rearranging means, generates a code in accordance with said count of continuous reference data and the value of the data which is not the reference data output after the continuous reference data, and generates a second code and subtracts said predetermined value from the count when said count reaches a predetermined value.

3. A data encoding apparatus as set forth in claim 1, wherein said data string rearranging means comprises

a storing means for storing said input data at a designated address upon receipt of a data write request and reading the data stored at the designated address upon receipt of a data read request,

a writing means for outputting said data write request to said storing means, generating predetermined write addresses in accordance with the input sequence of said input data corresponding to the input data, and storing said input data at corresponding write addresses of said storing means, and

a reading means for outputting said data read request to said storing means, sequentially generating predetermined read addresses, and sequentially reading the data stored at the read addresses of said storing means, and

wherein said block end data detecting means detects the address read latest in said reading means

among said write addresses of said input data not coinciding with said reference data as the block end address, and

wherein said block end judging means judges that the output data corresponding to the read address is said block end data when said read address and said block end address coincide.

4. A data encoding apparatus as set forth in claim 3, wherein

said reading means generates successively increasing or decreasing addresses, and

said block end judging means detects the largest or smallest address among the transformed data write addresses W_ADD not coinciding with the reference data as the block end address.

5. A data encoding apparatus as set forth in claim 4, wherein said block end judging means comprises:

an address holding means for holding an initial address at the input starting time of the block data, receiving an address holding request, and holding said write address as said block end address;

a reference data detecting means for detecting noncoincidence of input data of said data string rearranging means and said reference data;

an address comparing means for comparing the

relative sizes of the write address generated at said writing means and the address held in said address holding means; and

an address holding requesting means for requesting holding of a write address corresponding to said input data to said address holding means in accordance with results of comparison at said address comparing means when noncoincidence of said input data and said reference data is detected at said reference data detecting means.

6. A data encoding method for encoding data for every data block of a predetermined number of pixels of data, including:

a block end data detecting step for detecting data not coinciding with reference data and latest in a predetermined output sequence corresponding to the input sequence of the input data from among the data of sequentially input data blocks as the block end data; and

an encoding step for outputting said input data in said output sequence, sequentially generating codes in accordance with the output data when said output data is not said block end data, generating a first code after the generation of a code in accordance with the output data when said output data is said block end data, and terminating the encoding of the data block containing the

output data.

7. A data encoding method as set forth in claim 6, wherein in said encoding step, the processing is carried out to count the number of continuously output reference data, generate a code in accordance with said count of the continuous reference data and the value of the data which is not reference data output after the continuous reference data, and generate a second code and subtracts said predetermined value from the count when said count reaches a predetermined value.

8. A data encoding method as set forth in claim 6, wherein said block end data detecting step includes

a step of generating predetermined write addresses in accordance with the input sequence of said input data corresponding to the input data,

a step of detecting the address read latest in said output sequence among said write addresses of said input data not coinciding with said reference data as the block end address, and

a step of storing said input data at the corresponding write addresses of the storing means, and

wherein said encoding step includes

a step of sequentially generating predetermined read addresses,

a step of sequentially reading the data stored

at the read addresses of said storing means, and

a step of sequentially generating codes in accordance with the output data when said read address and said block end address do not coincide, while generating the first code after the generation of the code in accordance with the output data when they coincide, and terminating the encoding of the data block containing the output data.

9. A data encoding method as set forth in claim 6, wherein

in the step of detecting said block end address, the largest or smallest address among the write addresses of the input data not coinciding with the reference data as the block end address is detected and

in the step of generating said read address, successively increasing or decreasing addresses is generated.

10. A data encoding method as set forth in claim 9, wherein the step of detecting said block end addresses repeats the following steps of:

a step of detecting said block end address,

a step of holding an initial address at the input starting time of the block data;

a step of detecting noncoincidence of said input data and said reference data;

a step of comparing the relative sizes of the generated write address and the held address; and

a step of holding a write address corresponding to said input data replacing said held address in accordance with results of comparison at the step of comparing the relative sizes when noncoincidence of said input data and said reference data is detected at said step of detecting noncoincidence.

11. A camera system for compressing and encoding generated image data for every data block of a predetermined number of pixels of data, comprising:

an image pickup means for picking up a desired image and generating image data;

a transforming means for transforming said generated image data based on a predetermined quadrature transform for every data block;

a data string rearranging means for sequentially receiving as input said orthogonally transformed image data for every data block and outputting the input image data in a predetermined output sequence corresponding to the sequence of input of the input image data;

a block end data detecting means for detecting input image data not coinciding with predetermined reference data and latest in said output sequence from

among the input image data of said data string rearranging means as block end data;

a block end judging means for judging whether or not the output image data of said data string rearranging means is said block end data;

an encoding means for sequentially generating codes in accordance with the output image data of said data string rearranging means, generating a first code after the generation of the code in accordance with the output image data when it is judged at said block end judging means that the output image data is said block end data, and terminating the encoding of the data block containing the output image data; and

a processing means for performing predetermined processing with respect to the image data encoded at said encoding means.

12. A camera system as set forth in claim 11, wherein said processing means performs at least one processing of recording, reproduction and display, or transmission with respect to said encoded image data.

13. A camera system as set forth in claim 11, wherein said encoding means counts the number of said reference data continuously output from said data string rearranging means, generates a code in accordance with said count of continuous reference data and the value of

the data which is not the reference data output after the continuous reference data, and generates a second code and subtracts said predetermined value from the count when said count reaches a predetermined value.

14. A camera system as set forth in claim 13, wherein said data string rearranging means comprises

a storing means for storing said input image data at a designated address upon receipt of a data write request and reading the image data stored at the designated address upon receipt of a data read request,

a writing means for outputting said data write request to said storing means, generating predetermined write addresses in accordance with the input sequence of said input image data corresponding to the input image data, and storing said input image data at corresponding write addresses of said storing means, and

a reading means for outputting said data read request to said storing means, sequentially generating predetermined read addresses, and sequentially reading the image data stored at the read addresses of said storing means, and

wherein said block end data detecting means detects the address read latest in said reading means among said write addresses of said input image data not coinciding with said reference data as the block end

address, and

wherein said block end judging means judges that the output data corresponding to the read address is said block end data when said read address and said block end address coincide.